encoding a high lysine content or high sulfur content seed storage protein or modified seed storage protein of same and

b) regenerating a transformed cereal plant from the transformed cell, wherein seeds from the transformed plant exhibit an elevated level of lysine or sulfur-containing amino acid compared to seeds of a corresponding non-transformed cereal plant.

76. The method of claim 75 wherein the transformed plant seed is from maize, wheat, rice, or sorghum.

77. The method of claim 76 wherein the transformed plant seed is from maize or sorghum.

78. The method of claim 75 wherein the polynucleotide encodes barley alpha hordothionin or soybean 2S albumin protein or modified proteins of same.

79. A transformed cereal plant seed produced by the method of claim 75.

80. A transformed cereal plant seed, the endosperm of which contains an elevated level of lysine or a sulfur-containing amino acid compared to a corresponding non-transformed seed.

81. The transformed seed of claim 80 wherein the transformed plant seed is from maize, wheat, rice, or sorghum.

82. The transformed seed of claim 80 wherein the transformed plant seed is from maize or sorghum.

83. The transformed seed according to claim 80 wherein the amount of lysine or sulfur-containing amino acid in the seed is increased at least about 10 percent by weight compared to a corresponding non-transformed seed.

84. The transformed seed according to claim 83 wherein the amount of lysine or sulfur-containing amino acid in the seed is increased at least about 15 percent by weight compared to a corresponding non-transformed seed.

85. The transformed seed according to claim 84 wherein the amount of lysine or sulfur-containing amino acid in the seed is increased at least about 20 percent by weight compared to a corresponding non-transformed seed.

86. A food or feed product produced from the transformed seed of claim 80.

87. The food or feed product of claim 86 comprising meal, flour, grits, hominy, or porridge.

89. An expression cassette comprising a seed endosperm-preferred promoter operably linked to a structural gene encoding a seed storage protein or a modified seed storage protein having an elevated level of lysine or methionine.

90. The expression cassette according to claim 89 wherein the promoter is a gamma zein promoter or a waxy promoter.

91. A vector comprising the expression cassette of claim 89.

92. A plant cell transformed with the vector of claim 91.

93. A transformed plant comprising the vector of claim 91.

94. A transformed seed from a cereal plant which has been transformed to express a seed storage protein or a modified seed storage protein in the endosperm of the seed, wherein the seed exhibits and elevated level of lysine or a sulfur-containing compound compared to a non-transformed seed.

Remarks

Reconsideration of the present application is respectfully requested.

Respectfully submitted,

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